UNIVERSITY OF MARYLAND
DEPARTMENT OF AGRONOMY
1931

CROP LAND UTILIZATION, YIELD TRENDS AND CROP PRODUCTION SUMMARIES for MARYLAND

Prepared
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FOREWORD

An Agronomy research program of a State Experiment Station can be effective and successful only to the extent that it shows progress in the solution of its farm production problems. Without a full appreciation of the relative importance of the several agricultural enterprises, it is impossible to give appropriate attention to each of them or to maintain a balanced investigational program. Thus it is hoped that these pages will serve as a ready reference to the Maryland workers in this field and that they will be a further means of facilitating the coordination of agronomic research in its various phases.

The data in the tables represent analyses of the more important farm crop facts secured from the Federal Agricultural Census of 1930, together with statistical information on crop production from the U. S. D. A. Yearbooks and Statistical Bulletins. Table 1 is a general summary of the utilization of land for the principal crops grown in the State. In Tables 2 to 4 inclusive will be found the percentage of the plowable land used for each of the major crops by Counties and Regions, and in Table 5 the percentage of hay land devoted to each of the several kinds of hay produced on Maryland farms. Table 6 gives the intensity and relative importance per farm of field crop production in this state in comparison with neighboring states and a leading state. By referring to Tables 7 and 8 the total production and acreage trends may be noted for a longer period; and in Table 9 the trends in yields per acre. Table 10 gives acreage and production data on a miscellaneous list of important crops grown in Maryland.

Figure I is an Inter-regional comparison of the use of crop land, and Figure II shows the relative importance of field crops within the Regions. Figure III shows in a graphical way the trends of yields and acreages for the principal cereal crops.

J. E. M.
R. G. R.

TABLE 1.- Summary of percentage distribution of plowable land by regions and crops (1930 Census)

Region	Corn*	Small Grains	Hay	Pasture	Other cultivated Crops**
Maryland	20.4	22.6	13.9	20.2	10.6
Mountain Region	9.3	13.8	27.1	27.4	2.8
Mt. Valley Region	22.2	31.5	17.3	16.7	3.2
Piedmont Region	20.1	23.4	19.3	20.8	8.4
Southern Maryland	16.5	7.1	5.3	28.3	12.5
N. Eastern Shore	20.5	31.3	9.1	21.2	11.6
S. Eastern Shore	23.9	12.7	8.7	9.1	24.4

* All corn including sweet corn.

** Potatoes, tomatoes, tobacco, sweetpotatoes, and vegetables for sale.

TABLE 2.- Crop land utilization in Maryland by Regions and by Counties (1930 Census)

Region and County	Crop and Plowable Pasture Land	Percentage of Plowable Land in				
		Corn	Wheat	Barley Oats, Rye	Hay	Pasture
Maryland	2,668,177	18.7	19.0	3.6	13.9	35.9*
Mountain Region	134,869	9.0	3.2	10.6	27.1	27.4
Allegany	48,474	10.9	4.3	5.6	18.2	27.9
Garrett	86,395	8.0	2.6	13.4	32.1	27.1
Mt. Valley Region	426,772	20.6	28.6	2.9	17.3	16.7
Frederick	258,387	20.8	28.0	3.2	18.3	16.4
Washington	168,385	20.4	29.4	2.5	15.8	17.1
Piedmont Region	839,537	16.9	19.4	4.0	19.3	20.8
Baltimore	164,279	14.5	12.4	3.7	22.7	15.7
Carroll	183,797	19.4	26.9	7.2	21.4	7.6
Cecil	109,720	16.9	23.5	3.2	19.2	20.9
Harford	126,335	16.9	10.6	4.5	22.2	25.6
Howard	87,134	16.8	21.6	1.9	18.4	23.2
Montgomery	168,272	16.6	21.2	2.1	12.2	35.1
Southern Maryland	432,964	16.1	6.7	0.4	5.3	28.3
Anne Arundel	87,022	14.4	2.8	0.3	5.4	31.3
Calvert	58,455	16.2	1.9	0.1-	1.7	19.5
Charles	90,847	18.2	8.7	1.1	6.6	29.5
Prince Georges	120,869	14.8	5.2	0.3	5.3	27.4
St. Marys	75,771	20.8	14.8	0.4	6.5	31.4
N. Eastern Shore	480,020	18.5	30.7	0.6	9.1	21.2
Caroline	108,241	20.7	22.7	0.4	7.7	15.8
Kent	118,319	16.6	32.2	0.8	8.7	23.4
Queen Annes	148,181	20.3	32.8	0.5	9.0	25.5
Talbot	105,279	15.6	34.6	0.8	11.2	18.3
S. Eastern Shore	350,865	23.8	11.4	1.3	8.7	9.1
Dorchester	103,209	9.6	24.1	0.7	8.6	15.4
Somerset	61,173	24.9	8.5	2.0	12.0	5.6
Wicomico	87,971	30.4	2.8	1.6	8.8	4.7
Worcester	98,512	34.0	7.7	1.3	6.5	8.5

*Total pasture acreage.

FIGURE I.- Inter-regional Comparison of Use of Land for Field Crops

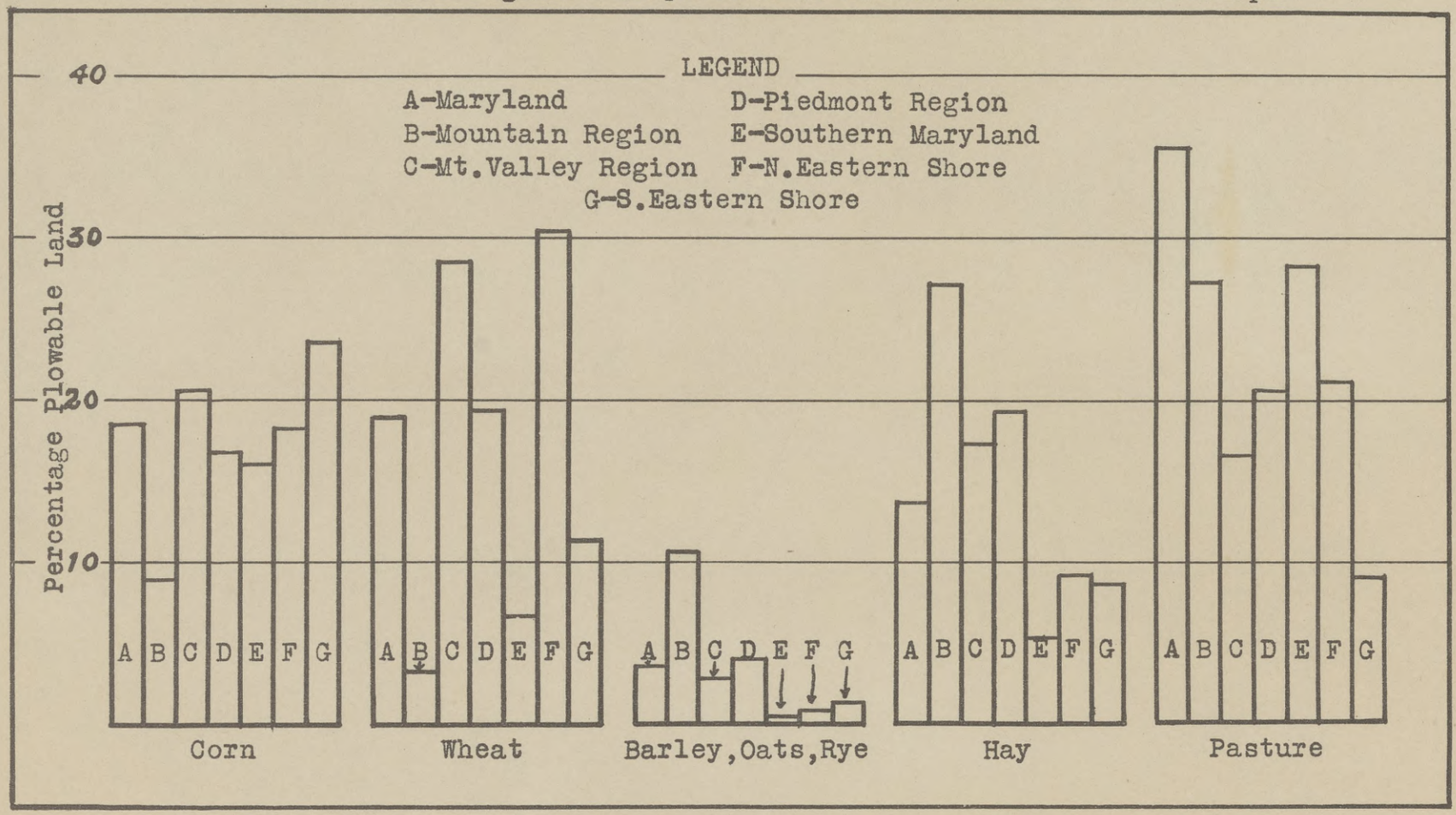


TABLE 3.- Percentage of total crop land in sweet corn, rye, oats, barley and buckwheat by Regions and Counties (1930 Census)

Region and County	Crop and Plowable Pasture Land	Percentage of Plowable Land in Sweet Corn	Rye	Oats	Barley	Buckwheat
Maryland	2,668,177	1.7	0.7	1.6	0.4	0.2
Mountain Region	134,869	0.3	0.5	9.9	0.2	4.3
Allegany	48,474	0.6	0.8	4.8	0.1-	0.8
Garrett	86,395	0.1	0.4	12.7	0.3	6.2
Mt. Valley Region	426,772	1.6	1.1	1.3	0.5	0.1-
Frederick	258,387	2.6	1.2	1.4	0.6	0.1-
Washington	168,385	0.1	1.0	1.1	0.4	0.1
Piedmont Region	839,537	3.2	0.9	2.4	0.8	0.1-
Baltimore	164,279	2.3	0.2	2.7	0.8	0.1
Carroll	183,797	4.4	2.7	3.2	1.4	0.1-
Cecil	109,730	1.9	0.1-	3.0	0.1	0.1-
Harford	126,335	7.8	0.1	4.0	0.4	0.1
Howard	87,134	1.8	0.5	0.9	0.5	0.1-
Montgomery	168,272	0.8	0.8	0.5	0.8	0.1-
Southern Maryland	432,964	0.4	0.3	0.1	0.1-	0.1-
Anne Arundel	87,022	0.6	0.1	0.2	0.1-	--
Calvert	58,455	0.1-	0.1-	0.1-	--	--
Charles	90,847	0.1-	1.0	0.1	0.1-	0.1-
Prince Georges	120,869	0.9	0.1	0.1	0.1-	0.1-
St. Marys	75,771	0.1-	0.1	0.2	0.1-	--
N. Eastern Shore	480,020	2.0	0.1	0.3	0.1	0.1-
Caroline	108,241	2.0	0.3	0.1-	0.1-	0.1-
Kent	118,319	1.0	0.1-	0.7	0.1-	--
Queen Annes	148,181	1.2	0.1-	0.2	0.2	--
Talbot	105,279	4.2	0.1	0.4	0.3	--
S. Eastern Shore	350,865	0.1-	1.1	0.2	0.1-	0.1-
Dorchester	103,209	0.1-	0.6	0.1-	0.1-	--
Somerset	61,173	0.1-	1.4	0.5	0.1-	0.1-
Wicomico	87,971	0.1-	1.4	0.2	0.1-	0.1-
Worcester	98,512	0.1-	1.2	0.1-	0.1-	0.1-

TABLE 4.- Percentage of total crop land used for the production of tobacco, tomatoes, white potatoes and vegetables for sale by Regions and Counties (1930 Census)

Region and County	Crop and Plowable Pasture Land	Percentage of Plowable Land in: Tobacco	Tomatoes	White Potatoes	Vegetables for sale
Maryland	2,668,177	1.2	2.1	1.1	5.8
Mountain Region	134,869	--	0.1	1.9	0.8
Allegany	48,474	--	0.2	1.4	1.1
Garrett	86,395	--	0.1-	2.1	0.7
Mt. Valley Region	436,387	0.1-	0.2	0.9	2.0
Frederick	258,387	0.1-	0.1	0.8	3.0
Washington	168,385	--	0.2	1.0	0.6
Piedmont Region	839,537	0.1-	0.9	1.1	6.3
Baltimore	164,279	--	0.2	2.1	10.9
Carroll	183,797	0.1-	0.5	1.0	7.7
Cecil	109,720	--	0.9	0.5	2.9
Harford	126,335	0.1-	0.2	0.6	10.4
Howard	87,134	0.1-	0.5	1.3	2.6
Montgomery	168,272	0.1	0.1	0.7	1.2
Southern Maryland	432,964	7.5	0.9	0.6	3.1
Anne Arundel	87,022	6.0	3.3	1.1	9.8
Calvert	58,455	1.1	0.2	0.1	0.3
Charles	90,847	6.8	0.1-	0.3	0.1
Prince Georges	120,869	0.8	0.6	0.8	3.7
St. Marys	75,771	7.2	0.4	0.3	0.4
N. Eastern Shore	480,020	--	3.6	0.3	7.6
Caroline	108,241	--	5.0	0.4	11.9
Kent	118,319	--	3.7	0.2	5.4
Queen Annes	148,181	--	2.4	0.2	4.2
Talbot	105,279	--	3.6	0.2	10.5
S. Eastern Shore	350,865	--	7.6	3.1	11.7
Dorchester	103,209	--	13.2	0.4	17.6
Somerset	61,173	--	9.4	3.3	13.1
Wicomico	87,971	--	3.9	0.9	11.6
Worcester	98,512	--	3.8	7.8	4.9

TABLE 5,- The percentage of hay land used for the production of the several classes of hay crops (1930 Census)

Region and County	Hay Acreage	Percentage of Hay Land in				
		Timothy or Timothy Clover	Clovers: Alsike, Red, and Mammoth	Clovers: Sweet, Crimson: Japan	Alfalfa	Annual Legumes
Maryland	370,117	78.1	4.3	2.2	5.7	6.9
Mountain Region	36,520	92.7	1.7	0.3	1.7	0.4
Allegany	8,804	88.3	1.0	0.4	5.9	0.3
Garrett	27,716	94.1	2.0	0.2	0.4	0.5
Mt. Valley Region	73,836	92.6	1.4	0.6	4.4	0.8
Frederick	47,173	94.3	1.5	0.5	2.3	1.2
Washington	26,663	89.7	1.3	0.8	8.1	0.1-
Piedmont Region	162,079	85.5	4.3	0.5	5.3	3.3
Baltimore	37,266	83.2	4.3	0.4	9.5	1.2
Carroll	39,244	94.8	0.5	0.6	3.2	0.2
Cecil	21,050	82.7	2.0	0.2	5.4	8.9
Harford	28,023	71.5	12.7	0.5	5.6	7.3
Howard	16,011	90.6	3.0	0.4	3.9	1.4
Montgomery	20,485	90.3	2.6	1.0	2.5	3.4
Southern Maryland	23,058	51.7	5.6	1.3	9.6	19.8
Anne Arundel	4,764	37.4	2.3	0.6	18.2	29.8
Calvert	965	42.2	10.1	2.3	18.5	18.4
Charles	5,997	54.5	5.2	0.8	2.8	16.1
Prince Georges	6,375	62.3	3.3	1.5	7.1	15.4
St. Marys	4,957	50.2	11.2	2.2	10.9	20.4
N. Eastern Shore	43,790	63.7	6.0	3.8	11.2	12.1
Caroline	8,384	40.3	8.6	4.5	9.6	32.7
Kent	10,301	72.2	4.2	1.0	14.0	5.2
Queen Annes	13,364	74.9	1.8	1.3	10.4	9.3
Talbot	11,741	60.1	10.6	8.7	10.8	7.7
S. Eastern Shore	30,385	26.4	11.0	16.0	5.3	31.4
Dorchester	8,858	43.0	12.4	7.8	9.2	19.3
Somerset	7,330	19.7	4.2	7.3	5.6	53.3
Wicomico	7,749	4.2	19.8	28.5	2.9	31.4
Worcester	6,448	37.9	6.4	22.4	2.5	23.0

TABLE 6.- Maryland compared with two neighboring states and a high production state with regard to acreage and intensity of production for corn, wheat, oats, barley and hay

[*In thousands - i.e., 000 omitted]

Crop and State	Acreage Harvested 1929 [1]	Pct. of Plow Land	Ave. Yield Per Acre 1919-1928	Ave. Production Per 100 Acres: Plow Land	Ave. Production Per Farm [2]
CORN	*		Bushels	Bushels	Bushels
Maryland	463	17.4	39.4	686	423
Pennsylvania	950	9.9	43.1	427	238
Virginia	1,353	16.9	26.8	453	213
Iowa	9,684	34.9	40.3	1,406	1,816
WHEAT					
Maryland	507	19.0	17.4	331	204
Pennsylvania	987	10.3	18.0	185	103
Virginia	657	8.2	13.1	107	50
Kansas	12,081	35.9	13.2	474	960
OATS					
Maryland	42	1.6	31.1	50	30
Pennsylvania	867	9.0	33.3	300	167
Virginia	54	0.7	22.4	16	7
Iowa	5,836	21.1	35.6	751	967
BARLEY					
Maryland	10	0.4	32.0	13	7
Pennsylvania	27	0.3	25.2	8	4
Virginia	13	0.2	26.8	5	2
Minnesota	2,000	9.2	26.4	243	285
HAY (Tame)			Tons	Tons	Tons
Maryland	369	13.8	1.47	20	13
Pennsylvania	2,558	26.7	1.42	38	21
Virginia	917	11.5	1.16	13	6
New York	4,055	38.5	1.35	52	34

[1] Acreage figures from 1930 Census.

[2] Acreage times average yield per acre (1919-1928, U. S. D. A. Yearbook 1931) divided by number of farms given in 1930 Census.

Average size of farm in acres for 1930:

Maryland, 101.3; Pennsylvania, 88.8; Virginia, 98.1; New York, 112.5; Iowa, 158.3; Minnesota, 166.9; Kansas, 282.9.

TABLE 7.- Total state production for corn, wheat, oats, barley, rye, and hay in Maryland during the period 1891-1930

[In thousands- i.e., 000 omitted]

Year	Corn : Bushels	Wheat : Bushels	Oats : Bushels	Barley : Bushels	Rye : Bushels	Hay : Tons
Averages:						
1891-1895	15,545	7,387	2,046	--	--	--
1896-1900	18,450	11,556	1,793	--	--	--
1901-1905	20,793	11,620	945	31	299	--
1906-1910	21,789	11,854	994	73	352	439
1911-1915	24,080	9,981	1,309	130	407	448
1911	24,455	9,378	1,242	92	406	256
1912	24,455	8,985	1,350	108	418	575
1913	22,110	8,113	1,260	145	389	491
1914	24,531	13,158	1,161	165	425	448
1915	24,850	10,272	1,530	170	396	468
1916-1920	25,821	10,470	1,558	149	355	599
1916	26,325	10,400	1,357	192	356	688
1917	27,300	11,475	1,457	125	400	552
1918	24,010	11,346	1,980	186	525	614
1919	26,445	8,964	1,372	132	231	537
1920	25,025	10,166	1,625	110	262	605
1921-1925	23,467	9,522	1,702	232	266	576
1921	25,155	8,260	1,620	120	238	498
1922	25,680	9,537	1,740	128	258	658
1923	25,231	11,520	1,758	132	269	405
1924	16,337	7,900	1,632	385	225	740
Census 1924	13,346	7,664	1,173	288	184	529
1925	24,930	10,395	1,760	396	342	578
1926-1930	18,062	10,072	1,633	395	268	596
1926	22,049	11,960	1,706	343	270	516
1927	22,660	9,188	1,708	274	214	733
1928	19,345	8,745	1,701	416	225	754
1929 r	18,980	9,380	1,457	416	297	627
Census 1929	14,543	9,095	1,165	286	233	474
1930 r	7,276	11,086	1,592	525	333	348

Sources of data: (1) Crop and Livestock Estimates as reported in U. S. D. A. Yearbooks and in U. S. D. A. Statistical Bulletins, nos. 11, 12, 28, and 29; (2) U. S. Census Reports.

r = revised as of Dec. 26, 1931. Md. Crop Reporting Service

1929 r	15,718	9,108	1,316	291	238	484
1930 r	6,858	11,063	1,470	384	285	309
1931	20,710	9,696	2,010	528	378	469

TABLE 8.- Total state acreages for corn, wheat, oats, barley, rye, and hay in Maryland during the period 1866-1930

[In thousands of acres-i.e.,000 omitted]

Year	Corn	Wheat	Oats	Barley	Rye	Hay
Averages:						
1866-1870	498	514	286	1	38	166
1871-1875	481	471	147	-	25	167
1876-1880	511	511	168	-	24	192
1881-1885	696	618	103	1-	28	284
1886-1890	728	557	116	-	--	---
1891-1895	646	501	96	-	--	---
1896-1900	598	682	78	-	--	---
1901-1905	628	784	39	2	21	---
1906-1910	652	708	38	2	23	324
1911-1915	677	613	45	5	26	381
1916-1920	671	664	50	5	23	428
1916	675	650	46	6	23	465
1917	700	675	47	5	25	442
1918	686	732	60	6	35	455
1919	645	664	49	4	16	380
1920	650	598	50	4	17	399
1921-1925	602	553	56	7	17	405
1921	645	590	60	4	17	390
1922	642	578	58	4	17	406
1923	642	600	59	4	17	386
1924	527	500	48	11	15	426
Census 1924	516	485	47	11	15	401
1925	554	495	55	12	18	416
1926-1930	523	519	51	12	16	408
1926	554	520	52	10	15	396
1927	515	525	51	9	14	443
1928	530	530	54	13	15	430
1929	~~530~~ 499~	~~536~~ 506~	47	~~13~~ 10~	~~18~~ 19~	~~407~~ 373~
Census 1929	499	507	42	10	13	370
1930	~~495~~ 508~	~~482~~ 481~	49	~~15~~ 12~	~~18~~ 19~	~~366~~ 369~
1931	545	404	67	16	21	381

Sources of data: (1) Crop and Livestock Estimates as reported in U. S. D. A. Reports and Yearbooks, and in U. S. D. A. Statistical Bulletins nos. 11, 12, 28, and 29; (2) U. S. Census Reports.

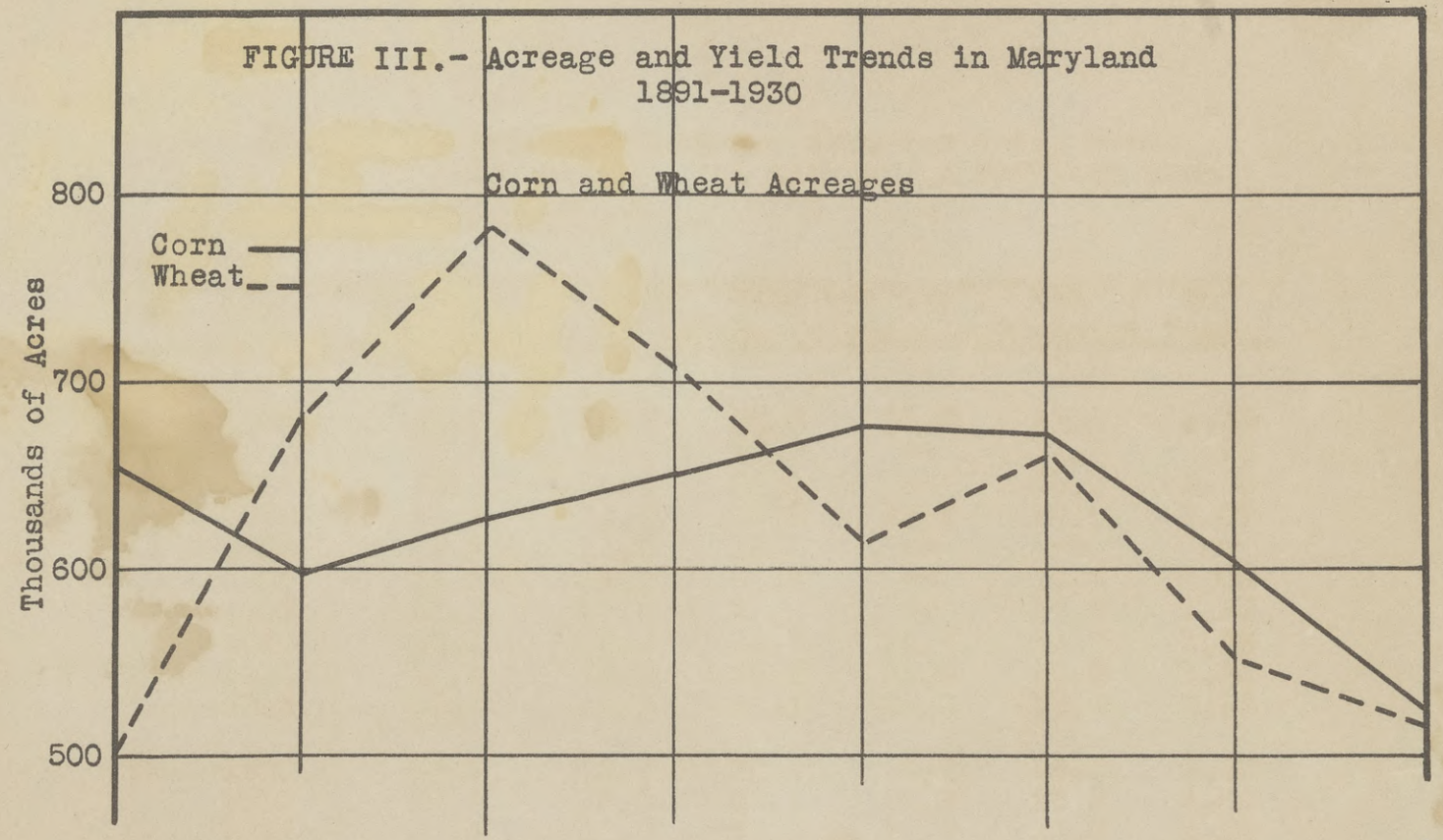
~ = revised as of Dec. 26, 1931, Md. Crop Reporting Service

TABLE 9.- Average yield per acre for corn, wheat, oats, barley, rye and hay in Maryland from 1866-1930.

Year	Corn : Bushels	Wheat: Bushels	Oats : Bushels	Barley : Bushels	Rye : Bushels	Hay : Tons
Averages:						
1866-1870	25.8	10.5	22.3	21.6	12.0	1.25
1871-1875	23.7	10.7	17.7	--	11.9	.99
1876-1880	28.6	13.5	22.1	--	13.0	1.25
1881-1885	23.5	12.0	19.3	25.9	10.6	1.07
1886-1890	22.9	11.8	18.5	--	--	--
1891-1895	24.0	14.8	21.4	--	12.6	1.08
1896-1900	30.8	17.0	23.9	--	14.2	1.13
1901-1905	33.1	14.8	24.7	24.7	14.3	1.23
1906-1910	34.1	16.7	26.8	31.4	15.2	1.36
1911-1915	35.6	16.3	29.2	29.2	15.6	1.17
1916-1920	38.5	15.8	30.8	29.7	15.2	1.40
1916	39.0	16.0	29.5	32.0	15.5	1.48
1917	39.0	17.0	31.0	25.0	16.0	1.25
1918	35.0	15.5	33.0	31.0	15.0	1.35
1919	34.0	14.5	23.8	29.0	11.0	1.14
1920	32.5	17.0	29.0	23.5	12.4	1.24
1921-1925	33.3	17.8	27.3	27.3	13.3	1.20
1921	33.0	15.5	25.5	26.0	11.0	1.09
1922	34.0	17.0	26.5	27.0	12.0	1.37
1923	35.0	19.5	27.5	27.0	13.0	.89
1924	28.0	15.8	29.5	28.0	12.5	1.53
Census 1924	27.7	15.8	29.2	26.8	12.6	1.32
1925	36.5	21.0	27.5	28.5	18.0	1.14
1926-1930	28.8	19.7	28.6	29.0	13.4	1.20
1926	32.5	23.0	28.5	30.0	15.0	1.07
1927	35.5	17.5	29.0	26.5	12.5	1.38
1928	31.0	17.0	27.5	27.5	12.0	1.42
1929	31.5	18.0	28.0	29.1	12.5	1.30
Census 1929	31.4	18.0	27.9	29.1	12.6	1.28
1930	13.5	23.0	30.0	32.0	15.0	.84

Sources of data: (1) Crop and Livestock Estimates as reported in U. S. D. A. Reports and Yearbooks, and in U. S. D. A. Statistical Bulletins nos. 11, 12, 28, and 29; (2) U. S. Census Reports.

FIGURE III.- Acreage and Yield Trends in Maryland 1891-1930



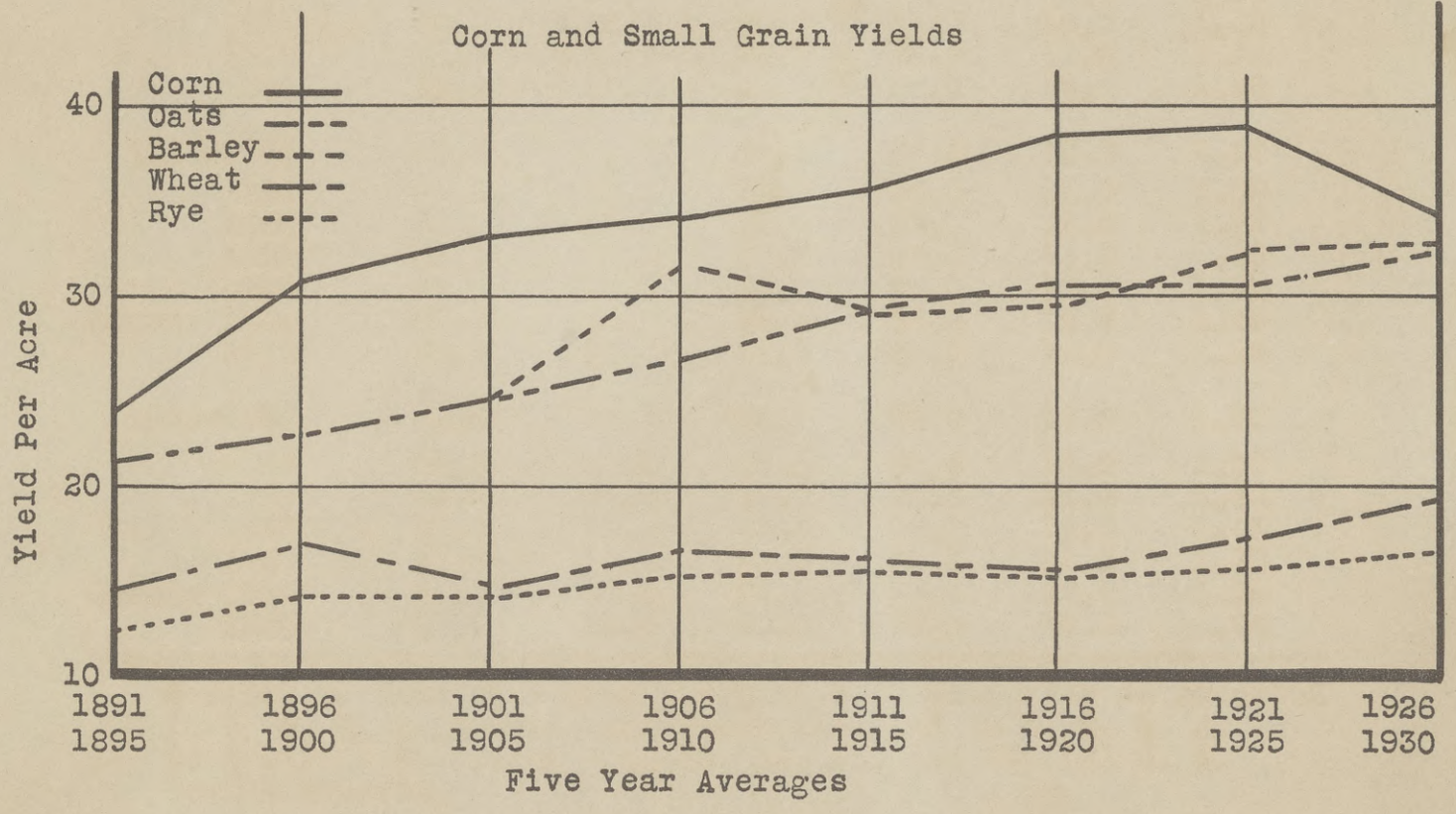


TABLE 10.- Acreage, production and yield per acre in Maryland for miscellaneous crops

Crop and Year		Acreage (Census)	Production (Census)	Yield Per Acre: Census	Yield Per Acre: Period Ave.[1]
Buckwheat			Bu.	Bu.	20.8 bu.
	1929	6,448	118,817	18.4	(1919-'28)
	1924	6,948	118,625	17.1	
	1919	8,736	168,639	19.3	
Soybeans (all purposes)	1929	28,471	54,363	--	13.4 bu. (1926-'29)
Cowpeas (all purposes)	1929	4,313	4,123	--	8.8 bu. (1926-'29)
Potatoes(white)					92 bu.
	1929	28,9[illegible]8	3,366,152	112	(1919-'28)
	1924	36,501	3,408,106	93	
	1919	46,837	4,918,766	105	
Sweetpotatoes					138 bu.
	1929	8,984	1,629,873	181	(1919-'28)
	1924	6,683	941,314	141	
	1919	10,185	1,453,880	143	
Tobacco			Lbs.	Lbs.	773 lbs.
	1929	32,974	21,624,127	656	(1919-'28)
	1924	31,700	22,473,735	709	
	1919	28,550	17,336,859	607	
Corn Silage			Tons	Tons	7.8 Tons
	1929	25,979	216,019	8.32	(1919,'24,
	1924	18,311	127,752	6.98	'29 Census)
	1919	15,646	125,[illegible]17	8.02	
Alfalfa					2.4 Tons
	1929	21,262	41,305	1.94	(1923-'29)
	1924	18,748	---	--	
	1919	11,909	25,1[illegible]3	2.11	
Clovers- red,al-sike,mammoth	1929	15,744	22,471	1.43	1.4 Tons (1923-'29)
	1924	21,480	---	--	
Timothy,timothy and clover mixed	1929	288,975	352,430	1.22	1.[illegible] Tons (1923-'29 mixed)
	1924	317,263	---	--	
	1919	288,[illegible]55	318,347	1.10	
Sweet Corn					3.1 Tons
	1929	[illegible]5,217	---	--	(1919-'29)
	1924	43,051	---	--	
	1919	3[illegible],778	---	--	
Tomatoes					3.8 Tons
	1929	55,955	---	--	(1919-'29)
	1924	52,892	---	--	
	1919	5[illegible],003	---	--	

[1] Based on estimates given in U. S. D. A. Yearbooks inclusive of the years designated.